MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2016/2017

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology/ Foundation in Life Sciences / Foundation in Law)

17 OCTOBER 2016
2.30 p.m. – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **THREE** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet.

Instructions: Answer **ALL** questions. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

a. Identify the most suitable printer to print receipt from an Automated Teller Machine (ATM). Give a reason to support your answer.

(1.5 marks)

b. There are several characteristics that user need to consider in choosing a good quality LCD screen. List and explain briefly **THREE (3)** of these characteristics.

(4.5 marks)

c. What is the difference between system software and application software?

(2 marks)

d. Disk defragmenter is one of the most common utility program chosen by users to perform maintenance-type tasks on a computer. What is disk defragmenter? List **ONE (1)** benefit of using this program.

(2 marks)

QUESTION 2 [10 Marks]

a. What will happen to the network if :-
   i. central cable in the bus network is inoperable?
   ii. one of the node in ring network did not function?
   iii. hub in the star network did not function?
   iv. one of the node in bus network did not function?
   v. one of the node in star network did not function?

(5 marks)

b. List and explain **TWO (2)** data validation check that can be used in Database Management System (DBMS).

(3 marks)

c. There are two types of programming languages; low-level and high-level. Describe the difference between low-level and high-level programming languages.

(2 marks)

Continued...

QUESTION 3 [10 Marks]

a. Discuss briefly the difference between multimedia and interactive multimedia.

(2 marks)

b. State **THREE (3)** differences between graphics produced by painting software and drawing software.

(3 marks)

c. In protecting our computer system, the most secured authentication approach used is biometric authentication. What is biometric? Give **TWO (2)** examples of biometric devices that are often used to provide access to restricted locations.

(2 marks)

d. In order to further defend against botnet, a denial of service attack (DoS), improper use of a back door, and a spoofing attack, users can take action by installing firewall, intrusion detection software or honeypots. Explain briefly all the protection tools mentioned.

(3 marks)

QUESTION 4 [10 Marks]

System clock is an electronic device in a computer that issues a steady high-frequency signal that synchronizes all the internal components in the computer.

a. Based on information given above, how does a system clock and computer processing speed relate.

(2 marks)

b. Joe is an IT personnel in his department and one of his task is to install an operating system on a server and do maintenances. Help Joe to identify **TWO (2)** methods used by an operating system to handle programs which will directly affects user's productivity.

(3 marks)

c. Suzy has taken a new job as a network administrator. Although she has been an IT professional within her organization for a number of years, this particular responsibility is a new one for her. So, she has been studying network topologies. She is very confident about the hub that she is going to use in her network. It is brand new and highly recommended by some colleagues that she trusts. Recommend to Suzy the suitable network topology to be used. Give **ONE (1)** reason and **TWO (2)** advantages for the chosen topology. Support your answer with an illustration.

(5 marks)

Continued...

QUESTION 5 [10 marks]

Shaun wanted to create an online database system to catalogue all animals in the forest and their unique features for his final year project.

a. Suggest **FOUR (4)** relevant fields and their suitable data types for the database to store information about the animal.

(4 marks)

b. Shaun plans to create administrator password to enter the system. Draw a simple flow chart using selection control structure to solve the problem. Below is the algorithm for the program.

(3 marks)

1. Read the password entered
2. If the password = "admin"
   Then
   Logged in to the system
   Else
   Invalid password, try again

c. Identify the most suitable format to be uploaded to the system if Shaun wants to share a large size video with other users. Support your answer with a reason.

(1.5 marks)

d. One of the most common cause of system failure in a computer is an electrical power variation. It can cause loss of data and equipment to Shaun's online database system. Explain briefly **ONE (1)** type of electrical power variations.

(1.5 marks)

End of Paper